

FURTHER NOTES ON AUSTRALIAN COLEOPTERA,
WITH DESCRIPTIONS OF NEW GENERA AND
SPECIES.

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XVI.

CARABIDÆ.

LITHOSTROTUS (gen. nov. *Lebiidarum*).

Mas. Corpus pilis erectis vestitum; caput minus elongatum; oculi parvi (orbitu postoculari sat dilatato fere ultra oculum exstanti); palporum labialium articulus ultimus fortiter securiformis; mentum medium haud dentatum; antennarum articulus 3^{us} glabrer; prothoracis margo posticus fortiter lobatus; elytra postice oblique subtruncata; tarsi supra glabri, articulo 4^o breviter emarginato; unguiculi basin versus serrati; tarsorum anticorum articuli 3 subtus squamulati.

The small *Lebiid* for which I propose this generic name is not much like any other known to me, and I hardly know where to place it in the sub-family; perhaps its structural characters point to an alliance with *Diabaticus*.

L. cœrulescens, sp. nov. Modice elongatus, capite quam prothorax vix angustiori; sat nitidus; nigro-cœruleus, antennis rufopiceis, tibiis rufis; supra pilis erectis minus crebre vestitus; antennis sat robustis prothoracis basin vix superantibus; capite prothoracèque fortius minus crebre punctulatis; hoc leviter transverso, canaliculato, anguste marginato, cordato, antice subtruncato, angulis posticis acutis dentiformibus; elytris subovatis minus convexis, fortiter striatis, interstitiis grosse seriatim punctulatis (sicut interstitia in tubercula planata divisa videntur). Long., 2 l.; lat., $\frac{4}{5}$ l.

The very peculiar sculpture of the elytra renders this species easily recognisable. The seriate punctures in the interstices are so coarse as to equal the width of the interstices themselves, which are thus interrupted at short intervals, so as to present the appearance of the surface of the elytra being tessellated by almost similar longitudinal and transverse striæ; or the appearance might be described as that of the interstices consisting of series of small square flat tubercles.

Victoria; Alpine District.

ECTROMA.

E. parvicolle, sp. nov. Oblongum, postice paulo latius; testaceum elytris postice et segmento ventrali apicali infuscatis, prothoracæ obscure fusco-cincto et in medio fusco-bivittato; antennarum articulo basali 3° subbrevis; prothorace parvo sat transverso, antice subtruncato quam postice vix angustiori, lateribus parum arcuatis postice nullo modo sinuatis, angulis posticis sat rotundatis; elytris striatis. Long., $2\frac{4}{5}$ l.; lat., $1\frac{1}{5}$ l.

As both the specimens that I have seen of this insect are females, there is a possibility that the discovery of the male might involve its removal from *Ectroma*, although it appears so evidently congeneric with the females of the species previously attributed to the genus that I do not think there is any danger in placing it with them. It is not unlike, in color and markings, *E. obsoletum*, Blackb., and has somewhat the appearance of a washed-out specimen of *Sarothrocrepis corticalis*, Fab. It may at once be distinguished, however, from *E. obsoletum*, and from the others previously described of the genus by its comparatively small prothorax, the sides of which are not at all sinuate behind, while the hind angles are extremely obtuse—almost rounded off.

W. Australia; sent by Mr. French.

AGONOCHEILA.

A. perplexa, sp. nov. Ferruginea, capite prothoraceque rufescentibus, elytrorum sutura et vitta submarginali (hac postice dilatata) infuscatis; prothorace fortiter transverso, antice parum emarginato, angulis anticis rotundatis posticis obtusis, lateribus sat fortiter arcuatis mox ante medium subangulatis postice vix sinuatis; elytris fortiter crebre (fere ut *A. cribripennis*, Chaud., sed paulo magis crebre) punctulatis, distincte striatis; maris tarsorum anticorum articulis modice dilatatis. Long., $2\frac{1}{2}$ l.; lat., $1\frac{1}{10}$ l.

This species is easily recognisable by the puncturation of the elytra being as strong and coarse as, but evidently closer than, in *A. cribripennis*, Chaud., while its elytra are about as distinctly striate as those of *A. curtula*, Er., and its prothorax scarcely differs from that of the latter species except in being slightly less transverse, and with hind angles slightly less defined.

Victoria.

SCOPODES.

S. simplex, sp. nov. Ovalis; nigro-cæruleus; capite supra longitudinaliter sat fortiter striolato; prothorace quam caput angustiori, supra leviter striolato, modice transverso, angulis posticis obtusis bene determinatis, latitudine majori mox pone marginem anticum posita, lateribus postice sinuatis

antice subangulatis; elytris minus sericeis, striatis, interstitiis convexis (3° 3-punctato). Long. $2\frac{1}{2}$ l.; lat., 1 l. (vix).

Easily distinguishable by its uniform dark-blue color and by the absence of the appearance of silky tessellation on the elytra. These characters give it somewhat the general aspect of a *Catascopus*, but it seems to be a true *Scopodes*. The shape of the prothorax is more like that of *tasmanicus* than of any other species known to me, but the segment is less transverse than in *tasmanicus*, and is considerably more narrowed behind, with more explanate hind angles.

Victoria; on the higher mountains of the Alpine Range.

S. intermedius, sp. nov. Ovalis vel leviter ovatus; nigro-sericeus, elytris tessellatis, pedibus antennarumque basi luridis, illis plus minusve fulvo-variegatis; capite supra longitudinaliter sat fortiter striolato; prothorace quam caput angustiori, supra crebre sat distincte nec ordinatim striolato, modice transverso, angulis posticis sat fortiter dentiformibus, latitudine majori mox pone marginem anticum posita, lateribus ante medium fortiter angulatis (angulis subdentiformibus); elytris striatis interstitiis convexis sinuato-subinterruptis (3° 3-foveolato). Long., $2-2\frac{2}{5}$ l.; lat., $\frac{9}{10}$ —1 l.

This species has much the appearance of *S. sigillatus*, Germ., from which it differs chiefly by its considerably larger size and darker color, and by the much greater convexity of its elytral interstices (including the suture).

Tasmania; sent to me by A. Simson, Esq.

S. flavipes, sp. nov. Ovalis; sat nitidus; æneo-subauratus, sericeus, elytris plus minusve tessellatis, antennis pedibusque (tarsis vix infuscatis) flavo-testaceis; capite supra longitudinaliter striolato; prothorace quam caput angustiori, supra crebre subtiliter nec ordinatim striolato, modice transverso, angulis posticis sat fortiter dentiformibus, latitudine majori mox pone marginem anticum posita, lateribus ante medium fortiter angulatis (angulis subdentiformibus); elytris striatis, apice suturali subproducto, interstitiis vix convexis (3° 3-foveolato). Long., 2 l.; lat., $\frac{7}{10}$ l.

This species is another ally of *sigillatus*, compared with which it is a little larger, and more nitid, with a more golden tone of color; with legs and antennæ entirely yellow except a slight infuscation of the tarsi. The prothorax resembles that of *sigillatus*, except in the base being differently shaped; in *sigillatus* the hinder edge of the projecting hind angle runs *obliquely* hindward and inward so that the outline of that part of the prothoracic margin which is in front of the projecting hind angle is continued almost in the same direction for a short distance

behind the hind angle, while in the present species the hind margin of the hind angle runs directly inward almost at right angles to the general lateral outline of the prothorax. The elytra are very like those of *sigillatus*, but with the interstices scarcely so convex, and the sutural apex evidently more produced.

S. Australia.

CYCLOTHORAX.

C. cinctipennis, Blackb. This species seems to be identical with that described by Castelnau under the name *Phorticosomus lateralis*, and must, therefore, stand as *Cyclothorax lateralis*, Cast. It has nothing to do with *Phorticosomus*.

HYDROPHILIDÆ.

PARACYMUS.

P. (Cyclonotum) pygmæus, Macl. I have recently received examples (compared with the type) of this insect from Mr. Lea. They seem certainly identical with *Paracymus (Hydrobius) nitidiusculus*, Brown. Macleay's is the older name.

STAPHYLINIDÆ.

PHILONTHUS.

P. sanguinicornis, Fauv. This species (from comparison with a type of Macleay's species sent to me by Mr. Lea) is identical with *Philonthus subcingulatus*, Macl., and must, therefore, become a synonym as Macleay's is the older name.

SCOPÆUS.

S. ruficornis, Fvl. This insect is probably, judging by Fauvel's description, identical with that described by Macleay as *Stilicis ovicornis*. I have recently obtained from Mr. Lea an example of the latter that has been compared with Macleay's type, and it is certainly a *Scopæus*. Macleay's is the older name.

NITIDULIDÆ.

BRACHYPEPLUS.

B. Haagii, Reitter, seems to be identical with *B. Murrayi*, Macl., of which Mr. Lea has sent me an example compared with the type. Reitter's description is too brief for absolutely certain identification, but the specimen of *B. Murrayi* agrees well with it as far as it goes. Both are founded on examples from Queensland. Macleay's is the older name.

CARPOPHILUS.

C. excellens, Reitter, is probably identical with *C. luridipennis*, Macl., of which Mr. Lea has sent me an example compared with the type. Macleay's is the older name.

MACROURA.

M. Baileyi, Blackb. This species seems to be identical with *M. (Carpophilus) obscurus*, Macl., of which Mr. Lea has sent me an example compared with the type. Macleay's is the older name.

MYCETOPHAGIDÆ.

DIPLOCÆLUS.

D. Leai, sp. nov. Sat late ovalis; brunneus, pilis elongatis concoloribus erectis vestitus; capite cum prothorace sparsim sat fortiter punctulato; hoc quam longiori fere duplo latiori, utrinque profunde longitudinaliter bisulcato (sulco interno basin versus late dilatato), in medio canaliculato (canali basin versus dilatato), antice et postice bisinuato, ad basin inæqualiter marginato, angulis posticis sat acutis; elytris vix manifeste striatis, longitudinaliter seriatim punctulatis, puncturis in seriebus alternis his majoribus illis minoribus; segmento basali ventrali in medio oblique bistriato; antennarum clavæ articulo 1° quam 2^{us} vix angustiori. Long., 3½ l.; lat., 1½ l.

Very distinct by its large size and the long erect pilosity with which it is clothed, the very strongly impressed sulci of its upper surface, &c.

N.S. Wales; taken by Mr. Lea.

LAMELLICORNES.

TEMNOPLECTRON.

T. diversicolle, sp. nov. Rotundato-ovatum; convexum; nigrum, obscure viridi-micans, pedibus rufescentibus, antennis palpisque testaceis; capite sat æquali vix planato vix manifeste punctulato, margine antico in medio bidentato; prothorace sublævi, quam longiori fere duplo latiori, sat convexo; lateribus antice subito oblique convergentibus pone medium vix manifeste marginatis, angulis anticis acutis (posticis rotundatis); elytris convexis lævibus, obsoletissime 7-striatis et striis distinctis nonnullis (his postice abbreviatis) in parte laterali quasi-epipleurali. Long., 3½ l.; lat., 2½ l.

This species is at once distinguished from the three known to me of those previously described as occurring in Queensland by the absence of a continuous reflexed margin to the prothorax. An extremely fine carinated edge is barely traceable for a short distance from the base, and is followed by an interval in which the prothorax has no trace whatever of a reflexed margin. The fourth Queensland species (*T. politulum*, Macl.) I have not seen, and its author has not characterised the structure of its prothoracic

margin; but it is evidently distinct from the present insect, as its size is given as much smaller (long., $2\frac{1}{4}$ l.), and its head is said to have a "small sharp notch on either side under the eyes," which is not present in the specimen before me. Besides the Queensland species three from Western Australia have been described by Sir W. Macleay as attributable to this genus; they, however, are very different from the Queensland species, and perhaps not genuine members of *Temnoplectron*, as two of them are said to have the clypeus "sex-dentate in front;" and the other (scarcely described) is a very minute species (long., 1 l.). The examples on which this description is founded are females. Probably the sexual characters of the male are very similar to those in the other species of the genus.

N. Queensland.

RHOPÆA.

R. callabonnensis, sp. nov. Sat elongata; pubescens, capite inter oculos prothorace sternis (his densissime) pygidio pedibusque longe villosis; rufescens vel flavo-brunneus; clypeo (hoc fortiter concavo) et capite postice sublevibus; capite inter oculos crassissime ruguloso; prothorace quam longiori (et postice quam antice) duabus partibus latiori, minus crebre subfortiter punctulato, lateribus crenulatis angulis posticis obtusis; elytris subcrasse rugulosis, obsolete 4-costatis.

Maris antennarum flabello elongato 7-articulato. Long., 11 l.; lat., $5\frac{1}{4}$ l.

Differs from all its previously described congeners except *R. Mussoni*, Blackb., by its much coarser sculpture. From *Mussoni* it may be at once distinguished by the antennal flabellum of the male having seven equal joints, by the deeply concave and almost impunctulate clypeus, &c.

S. Australia; taken by Mr. Zietz near Lake Callabonna.

ZIETZIA (gen. nov. *Macrophyllidarum*).

Mas. Mentum sat planum, antice sat truncatum; maxillæ modicæ, loba externa dentata; palpi labiales breves, articulo apicali ad apicem obtuso; palpi maxillares elongati, articulo apicali quam ceteri conjuncti sublongiori supra longitudinaliter impresso; labrum perpendiculare haud emarginatum; antennæ 10-articulatæ, clava 8-articulata arcuata quam stipes quintuplo longiori; elytra (vix seriatim) punctulata, vix distincte costulata; coxæ anticæ transversæ; pedes modici, tarsi haud dilatatis, unguiculis simplicibus.

This genus may be at once distinguished from nearly if not quite all other *Melelonthid* genera by the following characters in combination:—Claws simple, antennæ 10-jointed, with an 8-jointed club. It is no doubt allied to *Holophylla* and *Othnomius*.

Z. geologa, sp. nov. Oblonga; sat parallela; vix nitida; testaceo-brunnea; clypeo subverticali profunde concavo; capite inter oculos grosse ruguloso et breviter hirsuto postice in medio lævi; prothorace fortiter transverso sat grosse sat crebre punctulato, lateribus fortiter rotundatis, angulis anticis obtusis minus productis posticis subrectis; scutello fere ut prothorax, elytris magis grosse magis rugulose, punctulatis; pygidio minus verticali, sat gibboso, sat obscure punctulato; corpore supra setis pallidis brevibus (his singulis in puncturis singulis positis) vestito; corpore subtus antice longe postice minus perspicue hirsuto. Long., 8 l.; lat., 4 l. (vix).

This species is evidently much like *Holophylla furfuracea*, Burm., in general appearance; but as its antennæ, claws, and abdomen all differ in most important characters from those of *H. furfuracea* as Burmeister describes them, it can have nothing to do with that genus. As I have previously pointed out to the Roy. Soc. S.A. (Tr., 1867, p. 211), Burmeister and Erichson differ *inter se re* the abdominal character of *Holophylla*, which cannot be a member (if the former is reliable) of the *Macrophyllides*. Indeed, he distinctly says it is not. If he is wrong, and if moreover the antennal discrepancies were disregarded, on the supposition that both authors might have mistaken a female for a male, there would still remain the fact that both authors describe the claws as dentate, and that is a discrepancy which cannot be evaded.

S. Australia; taken by Mr. Zeitz near Lake Callabonna.

ANOPLOGNATHUS.

A. quadrilineatus, Waterh. This species is clearly identical with *A. abnormis*, Macl. Macleay's is the older name.

CORYNOPHYLLUS.

C. melas, Fairm. This species seems from the description quite indistinguishable from *C. Haroldi*, Shp., and is doubtless identical with it. Dr. Sharp's is the older name.

ISODON.

I. (Cheiropatys) pecuarius, Reiche. This insect is certainly, I think, an *Isodon*. *I. subcornutus*, Fairm., is almost certainly identical with it. Reiche's is the older name.

MICROVALGUS.

M. scutellaris, sp. nov. Nigro-piceus, squamis albis (nonnullis piceis intermixtis) vestitus, antennis palpis prothorace (maculis nonnullis exceptis) elytris que ferrugineis; prothorace quam longiori vix latiori, obscure squamose punctulato, antice sat angustato, angulis anticis acutis sat fortiter

productis posticis obtusis; elytris vix perspicue punctulato-striatis. Long., $1\frac{1}{5}$ — $2\frac{1}{5}$ l.; lat., $\frac{9}{10}$ —1 l.

This species is much like *M. Lapeyrousei*, L & G., but differs from it by larger size, dark-piceous color of scutellum, and mixture among the whitish scales of the upper surface of an almost equal proportion of *dark* scales.

N.S. Wales.

BUPRESTIDÆ.

CYPHOGASTRA.

C. Macfarlanei, Waterh. Mr. French has lately received a specimen taken in the Endeavour River District of N. Queensland apparently referable to this species (which was founded on an example from Murray Island in Torres Straits). Mr. Waterhouse's description consists merely of a few lines briefly indicating the differences between *C. Macfarlanei* and *C. venerea*, Thoms., so it is difficult to feel quite sure in identifying his insect, but certainly the differences between the specimen from N. Queensland before me and *C. venerea* seem to be almost exactly those Mr. Waterhouse specifies. The only discrepancy I observe is that whereas Mr. Waterhouse says *Macfarlanei* has "indications of a small impression below the shoulder," the elytra of Mr. French's insect present a *very distinct* impression *within* (rather than below) the shoulder—indeed, it is nearer to the suture than to the shoulder, but I do not think this quite sufficient distinction to warrant the bestowal of a new name.

METAXYMORPHA.

M. gloriosa, sp. nov. Nitida; modice elongata; modice angusta; splendide cœrulea, elytris (macula communi suturali apicali cœrulea et marginibus lateralibus sanguineis exceptis) testaceis; capite longitudinaliter leviter sulcato, minus fortiter vix crebre punctulato; prothorace fere ut caput punctulato, pone marginem anticum transversim impresso, lateribus leviter arcuatis, latitudine majori trans basin posita; elytris ad apicem 3-spinosis, sat fortiter striatis, striis sat subtiliter sat crebre punctulatis, interstitiis subplanis distincte sat crebre punctulatis; corpore subtus (sternorum lateribus punctulatis exceptis) fere lævi; segmento ventrali apicali (maris?) late triangulariter emarginato. Long., 13 l.; lat., $5\frac{1}{2}$ l.

This extremely fine and interesting new species of *Buprestidæ* has lately been received from N. Queensland by Mr. French. Apart from its totally different coloring and markings, it differs from *M. Grayi*, Parry, *inter alia* by the regular striation of its elytra. The cyaneous patch at the apex of its elytra, which is

their only marking, is of the same shape as the corresponding patch in *Stigmodera amabilis*, L. and G. (as figured Tr. Ent. Soc., 1866, t. 3, fig. 1), except that its external front angle is rounded off. The elytra have the same peculiar shape as those of *M. Grayi* in the front of their external margin, being obliquely sloped so as to continue the line of the external margin of the prothorax. The apical spines of the elytra are as in *M. Grayi*.

Semnopharus apicalis, v.d. Poll., appears to be a *Metaxymorpha* and to resemble the present insect; but it is evidently quite different, as the apical spot on its elytra is described as of different shape, its abdomen is said to be of fulvous color, and its elytral interstices impunctulate.

N. Queensland.

MALACODERMIDÆ.

XANTHEROS, *Fairm.*

I cannot see anything in M. Fairmaire's diagnosis of this genus inconsistent with its identity with either *Metriorhynchus* or *Trichalus* with which its author does not even compare it. I have an insect from Queensland which, as a species, agrees so well with the description of *X. nubicolis*, Fairm., that I can hardly doubt its being identical, and it certainly appears to be a *Trichalus*. *Metriorhynchus* and *Trichalus* cannot, in my opinion, be satisfactorily treated as generically distinct.

ATTALUS.

I do not think that the two Australian species which have been attributed to this genus (*abdominalis*, Er., and *australis*, Fairm.), are satisfactorily placed there. *Attalus* is distinguished (among the *Malachiides* with 11-jointed antennæ) by its possessing elongate lamellæ on its claws and having the second joint of its anterior tarsi in the male prolonged over the next two joints. In my collection are two *Malachiides* (from Tasmania and N.S.W., the localities from which the two species were described) which agree so well with the descriptions of *A. abdominalis* and *australis* that I can hardly doubt their being those species; but they do not present the special characters just mentioned, and, moreover, present a character that in itself seems to require their separation from *Attalus*—viz., the diminutiveness of the basal joint of the tarsi. I cannot ascertain that any genus has been named to which these species can be referred and therefore propose a new name for them, treating, however, a new species as the type of the genus to provide against the possibility of my not having correctly identified *abdominalis* and *australis*.

HYPATTALUS (gen. nov., *Malachiidarum*).

Palpi breves, articulo ultimo obconico; labrum transversum; caput sat breve; antennæ ad capitis latera insertæ, minus

elongatæ, 11-articulatæ, intus serratæ, articuli 2° parvo 3°-10° inter se plus minusve æqualibus, 11° longiori; prothorax modicus; elytra sat elongata abdomen tegentia; pedes sat elongati; tarsi modici, articulis basali vix distincto, 2° elongato, 3° 4° que brevibus; unguiculi parvi appendiculati.

This genus is sufficiently characterised among Australian genera as a *Malachiid* (having exsertile vesicles well developed), but with tarsi having their joints proportioned as (and much resembling) those of a *Clerid*.

H. punctulatus, sp. nov. Nitidus; pilis erectis minus crebre vestitus; niger, prothorace et abdominis parte mediana rufis, elytris obscure cyaneis testaceo-micantibus, antennarum articulis basalibus subtus pedibusque (plus minusve late) testaceis; capite sublævi, fronte impressa; antennis quam corporis dimidium vix brevioribus; prothorace fortiter transverso sublævi; elytris in disco distincte sat crebre antice et apicem versus obsolete punctulatis. Long., $1\frac{2}{3}$ l.; lat., $\frac{4}{5}$ l.

The legs vary in color, being in some examples testaceous, with only the base of the femora and the tarsi infuscate; in other examples almost entirely infuscate. At once distinguishable from *Attalus abdominalis*, Er., and *A. australis*, Fairm. (which I believe to be congeneric), by its considerably larger size and the different color of its elytra, which are of a pale-bluish color, with a testaceous gloss. Its distinctly punctulate elytra also separate it from *abdominalis*, and the scarcely defined sutural edging of its elytra from *australis*, in which (if I have identified it correctly) the suture is defined by a well-marked fine elevated line.

S. Australia; Eyre's Peninsula.

H. elegans, sp. nov. Nitidus; pilis erectis vestitus; colore præcedenti simillimus, elytris læte cœruleis et pedibus totis nigris exceptis; capite sublævi, fronte utrinque longitudinaliter impressa; antennis quam corporis dimidium paullo longioribus; prothorace minus fortiter transverso, sublævi; elytris in disco subfortiter minus crebre antice et apicem versus magis sparsim magis obsolete punctulatis. Long., 2 l.; lat., $\frac{9}{10}$ l.

The comparatively large size of this species renders it incapable of confusion with *Attalus abdominalis*, Er., and *A. australis*, Fairm., and its elytra are punctured much more evidently than in the former, and much more sparsely than in the latter of them. From *H. punctulatus* it differs by the color of its elytra—a brilliant metallic blue—and legs (though it is quite possible the latter may be variable), by the presence of a well defined fine sutural

edging of the elytra, by the larger and sparser punctures on its elytra, and by its less transverse prothorax.

N.S. Wales; Blue Mountains.

TENEBRIONIDÆ.

CESTRINUS.

C. Championi, sp. nov. Oblongus; piceo-niger, setis brevibus adpressis aureis sparsim vestitus; capite minus brevi, fortiter subrugulose punctulato; antennis prothoracem superantibus apicem versus leviter incrassatis; hoc leviter transverso, minus crebre (quam caput paullo minus fortiter) punctulato, antice arcuato-emarginato quam postice angustiori, postice in medio late leviter lobato, lateribus arcuatis postice leviter sinuatis, angulis posticis acute rectis, latitudine majori ad medium posita; elytris punctulato-striatis, puncturis in striis quadratis sat magnis, interstitiis subconvexis rugulosis; maris tibiis anticis pone apicem intus late leviter emarginatis, tarsis anticis leviter dilatatis. Long., $5\frac{1}{2}$ l.; lat., 2 l.

Larger than any previously described species of the genus except *Bidwelli*, Hope, which is described as having rows of tubercles on the elytra, and therefore must be very distinct. The head and prothorax are much less closely punctured than in *trivialis*, Er., the sides of the latter more sinuate behind, the seriate punctures of the elytra somewhat coarser. Mr. Champion has seen this insect, and cannot identify it with any previously described.

S. Australia; Morgan.

C. aspersus, sp. nov. Oblongo-ovatus; sat convexus; sat opacus; piceus, setis brevibus suberectis (alteris nigris, alteris pallidis) vestitus, antennis pedibusque plus minusve rufescentibus; capite rugulose sat crebre punctulato; antennis prothoracem haud superantibus; hoc fortiter transverso, crasse rugulose punctulato, antice minus fortiter arcuato-emarginato quam postice angustiori, postice truncato, lateribus sat arcuatis postice vix sinuatis, angulis posticis obtusis fere rectis, latitudine majori mox ante medium posita; elytris punctulato-striatis, interstitiis vix convexis rugulosis. Long., $2\frac{4}{5}$ — $3\frac{1}{5}$ l.; lat., $1\frac{1}{5}$ — $1\frac{3}{10}$ l.

I do not observe any well marked sexual characters in the examples of this species that have come under my notice. The presence of setæ of two colors vaguely intermingled gives the elytra a speckled appearance. This is the species referred to by Mr. Champion (Tr. Ent. Soc., 1894, p. 356) as closely allied to his *C. brevis*.

S. Australia.

C. angustior, sp. nov. Elongato-ovatus; minus convexus; minus nitidus; piceus vel piceo-niger, setis brevibus obscuris suberectis vestitus, antennis pedibusque plus minusve dilutioribus, capite rugulose sat crebre punctulato; antennis prothoracem superantibus, articulis 9° leviter 10° fortiter transversis; prothorace leviter transverso, ut caput punctulato, antice arcuato-emarginato quam postice multo angustiori, postice in medio late subquadratum lobato, lateribus leviter arcuatis postice manifeste sinuatis, angulis posticis rectis, latitudine majori ad medium posita; elytris punctulato-striatis, puncturis in striis quadratis sat magnis, interstitiis leviter convexis vix rugulosis; maris tibiis anticis versus apicem (ut *C. trivialis*, Er.) dilatatis, tarsis anticis leviter dilatatis. Long., $3\frac{2}{3}$ —4 l.; lat., $1\frac{2}{3}$ l.

This species seems nearer to *C. trivialis*, Er., than to any other described species. Compared with it, its color is of a much more brownish (rather than black) tone, its form is narrower, and more parallel, its prothorax is less transverse (to a casual glance appearing quite as long as wide), and more distinctly lobed at the base (the lobe appearing quite squarely truncate behind when viewed with the head of the insect towards the observer), and the antennæ are more slender with their third joint proportionally longer. Mr. Champion has compared this species with the types of those described by Hope and Pascoe and finds it distinct from them.

S. Australia.

C. eremicola, sp. nov. Oblongus; piceo-niger, setis brevissimis aureis retrorsum curvatis sat sparsim vestitus, antennis pedibusque picescentibus, tarsis ferrugineis; capite fortiter subrugulose punctulato; oculis parvis; antennis prothoracem superantibus, apicem versus parum incrassatis; prothorace sat transverso, fortiter sat crebre vix rugulose (fere ut caput) punctulato, antice arcuato-emarginato quam postice multo angustiori, postice in medio late leviter lobato, lateribus rotundatis postice nullo modo sinuatis, angulis posticis rectis, latitudine majori ad medium posita; elytris punctulato-striatis, puncturis in striis sat magnis sat rotundatis, interstitiis subelevatis sublævibus. Long., $5\frac{1}{3}$ l.; lat., $1\frac{2}{3}$ l.

This species, on account of its large size and non-tuberculate elytra, needs distinguishing only from *C. Championi*, to which it is rather closely allied; but it is readily separated from that insect by its more slender antennæ scarcely thickened towards the apex, its smaller eyes, and more transverse prothorax with coarser and much closer puncturation, the sides of which are rather strongly rounded and not at all sinuate behind. The

elytra also are differently sculptured, the striæ containing for the most part rounded and not very closely placed punctures, whereas in *C. Championi* the puncturation of the striæ is caused by fine transverse keels connecting interstice with interstice.

Central Australia; near Oodnadatta.

C. Zietzi, sp. nov. Oblongus; piceo-niger, setis brevissimis aureis retrorsum curvatis sat sparsim vestitus, antennis tarsisque vix dilutioribus; capite crebre subrugulose sat fortiter punctulato; oculis parvis; antennis prothoracem superantibus, apicem versus leviter incrassatis; prothorace sat transverso, crebre sat fortiter nec rugulose (fere ut caput) punctulato, antice arcuato-emarginato quam postice multo angustiori, postice in medio late minus perspicue lobato, lateribus rotundatis postice nullomodo sinuatis, angulis posticis sat acute rectis, latitudine majori ad medium posita; elytris punctulato-striatis, puncturis in striis minoribus crebris quadratis, interstitiis fere planis sublævibus. Long., $5\frac{1}{2}$ l.; lat., 2 l.

Another large species allied to the preceding, from which it differs by its antennæ somewhat more robust, its prothorax and head evidently more finely and closely punctulate, and by the sculpture of its elytra, the punctures of the striæ being similar to those of *C. Championi*, but evidently smaller. In *C. eremicola* the diameter of most of the punctures in the striæ is greater than the width of an interstice between the striæ; in this species much less. This species differs from *C. Championi* in its prothorax shaped like that of *C. eremicola*, in its smaller eyes, the smaller punctures in the elytral striæ, and the much less rugulose elytral interstices.

Central Australia; taken by Mr. Zietz near Lake Callabonna.

C. minor, sp. nov. Oblongus; piceo-niger, setis brevissimis fulvis sparsim vestitus, antennis pedibusque picescentibus, tarsis dilutioribus; capite sat crasse ruguloso, fronte impressa; oculis parvis; antennis prothoracem superantibus, apicem versus modice incrassatis, articulis 9° vix 10° leviter transversis; prothorace sat transverso, ut caput punctulato, antice arcuato-emarginato quam postice parum angustiori, postice fortiter bisinuato sed vix in medio lobato, lateribus parum arcuatis postice vix sinuatis, angulis posticis acutis, latitudine majori paullo ante medium posita; elytris punctulato-striatis, puncturis in striis sat magnis, interstitiis sat planis uniseriatim granulatis. Long., 3 l.; lat., $1\frac{1}{10}$ l.

May be distinguished superficially from its described congeners by its small size and dark antennæ in combination. It is also remarkable for the very slight curve of the sides of its pro-

thorax (scarcely greater than in *C. punctatissimus*, Pasc.) and the very slight narrowing of the front part of that segment, in which again it resembles *punctatissimus*, but it is of very much broader and less fragile-looking form than that species, and its prothorax is very much more strongly transverse and its elytral striae are very much more coarsely and less closely punctulate. *C. angustior* also has a prothorax with feebly arcuate sides, but it is much less transverse than that of *C. minor*, and is at its widest in the middle. The unique type of this species seems to be a female.

Victoria.

HOPATRUM.

H. Meyricki, sp. nov. Ovale; sat opacum; fuscum, setulis minutis albidis sat crebre vestitum; capite sat lato, crebre subtilius subrugulose punctulato, clypeo a fronte sulco vix manifesto diviso antice profunde triangulariter emarginato, ad latera sat fortiter (fere ut *H. Walkeri*, Champ.) producto; oculis nullo modo divisus; antennis brevibus, prothoracis basin haud attingentibus, articulis 8-10 transversis; prothorace quam longiori plus quam duplo latiori, ut caput punctulato, ad latera explanato (quam *H. Walkeri* paullo minus late), antice profunde emarginato, postice bisinuato, lateribus modice arcuatis postice nullo modo sinuatis, angulis omnibus acutis, latitudine majori ad basin posita; scutello ut prothorax punctulato; elytris quam prothorax parum latioribus, striatis, striis parum distincte punctulatis, interstitiis fere planis crebre subtilissime granulatis, setulis in interstitiis inaequaliter 4-seriatim dispositis; tibiis anticis sat brevibus a basi ad apicem sat fortiter dilatatis, angulo externo apicali acuto; tarsis setis sat crassis subtus sparsim vestitis. Long., $5\frac{3}{8}$ l.; lat., $2\frac{4}{8}$ l.

This is a fairly well marked species. It is distinguished from all its described Australian congeners by its large size, also from the species of the group of *H. diversum*, Champion, by the deeply emarginate front margin of its prothorax, from *H. torridum* and *Walkeri* by the sides of its prothorax not at all sinuous behind the middle.

W. Australia; taken by E. Meyrick, Esq.

H. Carpentariae, sp. nov. Ovale; sat opacum; nigrum vel piceonigrum, setulis obscure brunneis sat crebre vestitum; capite sat lato, crebre ruguloso, clypeo a fronte sulco sat profundo diviso antice profunde triangulariter emarginato, ad latera sat fortiter (fere ut *H. Walkeri*, Champ.) producto; oculis nullo modo divisus; antennis sat brevibus, prothoracis basin vix attingentibus, articulis 8-10 transversis; prothorace

quam longiori fere duplo latiori, crebrius subtiliter granulato, ad latera explanato (quam *H. Walkeri* multo minus late), antice sat fortiter emarginato, postice bisinuato in medio vix emarginato, lateribus leviter arcuatis postice manifeste vel vix sinuatis, angulis omnibus acutis, latitudine majori ad medium posita; scutello granulato; elytris quam prothorax paullo latioribus, striatis, striis punctis confertis subquadratis impressis, interstitiis sat crebre minus perspicue granulatis [alternis (præsertim 3°) sat manifeste convexis, 2° quam cetera multo angustiori], tibiis anticis subgracilibus a basi ad apicem minus fortiter dilatatis, angulo externo apicali acuto; tarsis setis sat crassis subtus sparsim vestitis. Long., 4—4½ l.; lat., 1⅔—2 l.

A somewhat inconspicuous species, apparently always covered with a very dense earthy indumentum completely concealing the characters. Its most reliable character seems to be the exceptional narrowness of the second elytral interstice, which near the apex is scarcely half as wide as the third. Compared with *H. Walkeri*, its prothorax is seen to be much less rounded laterally and to have a much more narrowly explanate border, while the granules of its elytral interstices are much less conspicuous and confused. Its elytral striæ, moreover, are scarcely rightly called "punctulate," but are divided by closely placed fine ridges which connect the interstices *inter se*. The inequality of its elytral interstices distinguishes this insect from *H. torridum* and *H. Meyricki*, and *inter alia* the separation of the clypeus from the hinder part of the head distinguishes it from the species of the *H. diversum* group, while its elongate and slender front tibiæ also distinguish it from *H. torridum*, &c.

Gulf of Carpentaria, Thursday Island, &c.

H. Adelaideæ, sp. nov. Sat late ovale; opacum; piceo-nigrum, pilis brevibus erectis aureo-fulvis dense vestitum; capite sat lato, crasse rugulose punctulato, clypeo a fronte sulco profundo diviso antice profunde rotundatim emarginato ad latera latissime (quam *H. Walkeri* magis late) producto; oculis nullo modo divisus; antennis brevibus prothoracem medium haud multo superantibus, articulis 8-10 transversis; prothorace quam longiori duplo latiori, crebre ruguloso (quam caput minus grosse) et subtiliter granulato, ad latera sat late (quam *H. Walkeri* vix minus late sed minus perspicue) explanato, antice sat fortiter emarginato, postice bisinuato, lateribus sat rotundatis postice nullo modo sinuatis, angulis anticis subacutis posticis rectis vel fere obtusis, latitudine majori paullo ante basin posita; scutello granulato; elytris quam prothorax parum latioribus, striatis (striis, binis intersternis exceptis, vix impressis et perspicue nec grosse punct-

ulatis), interstitiis (internis subconvexis externis planis) subtiliter crebrius punctulatis et sparsim granulatis; tibiis anticis sat brevibus, a basi ad apicem fortiter dilatatis, angulo externo apicali acuto; tarsis setis minus crassis subtus sparsim vestitis. Long., 4—4½ l.; lat., 2½ l.

This is a very distinct species owing to the presence of a short erect golden-fulvous pubescence rather closely clothing the upper surface. It is also well characterised by the strongly rounded sides of its prothorax, which are not in the least sinuous behind, and by the peculiar striation of its elytra, the sutural stria and the next to it on each elytron being well marked, while the rest of the striae are obliterated and their place supplied by mere rows of punctures. It is probably allied to *H. villigerum*, Blanch. (from N.W. Australia), which I have not seen; but I do not think it is likely to be identical with *villigerum* as the pubescence of that insect is described as "sparse" and "of a grey color," and the elytra as having "well-marked impunctate striae." The extreme remoteness *inter se* of the localities where the two species have been taken also points to specific distinctness. It is possible that this is the *Hopatrum* taken by Mr. Walker at Port Adelaide, which Mr. Champion (Tr. Ent. Soc., 1894, p. 359) thinks is perhaps *H. villigerum*.

S. Australia; near Adelaide; also on Yorke's Peninsula.

H. cowardense, sp. nov. Sat late ovale; subnitidum; nigrum, setulis pallidis minutis minus crebre vestitum; capite modice lato, antice longitudinaliter sat crasse ruguloso, postice subtiliter granulato, clypeo antice fortiter arcuatim emarginato, ad latera minus fortiter (oculos parum excedenti) producto, oculis nullo modo divisus; antennis prothoracis basin vix attingentibus, articulis 8-10 transversis; prothorace quam longiori plus quam duplo latiori, vix manifeste punctulato, obsoletissime (in lateribus magis distincte) granulato, antice profunde arcuatim emarginato, postice bisinuato, angulis anticis acutis posticis acute rectis retrorsum vix directis, latitudine majori mox ante basin posita; scutello manifeste punctulato; elytris sublævibus, punctis seriatis vix manifeste impressis, interstitiis planatis subcoriaceis subtilissime granulatis; corpore subtus pedibusque manifeste sat crebre squamosae nec fortiter punctulatis; tibiis anticis ad angulos acutos externos sat fortiter a basi dilatatis; tarsis anticis subtus pilis sat elongatis sericeis vestitis. Long., 5 l.; lat., 2½ l.

This remarkable species has not a little of the facies of *Pterohelæus*, but the fact of its tarsi being clothed with long hairs beneath (as in *H. dispersum*, Champ.), and of its clypeus being deeply excised after the *Hopatrid* fashion, shows that it

cannot be really a *Helaid*. On the whole, I see no reason to separate it from *Hopatrum*. When alive it is covered, as usual in *Hopatrum*, with a coating of earthy matter. At once distinguished by its non-striate elytra from all its described Australian congeners.

Coward Springs, near Lake Eyre.

Since writing this description I have examined three specimens of *Hopatrum* taken by Mr. Zietz at Lake Callabonna, which appear to me to be referable to this species, although at the first glance they might be considered to represent three species all distinct from *H. cowardense*. The sculpture of the upper surface seems variable to the utmost extent, but without any other marked differences. The sight of these has led me to remove the earthy incrustation from all the specimens that I took at Coward Springs, and which were all under one stone almost in the water of the spring. I had previously cleaned a couple of them, and had assumed the others to be similar. I find, however, that among the original batch there is no little variation. The type from which the diagnosis was drawn up has the prothorax very obsoletely granulate and the elytra almost levigate; but two specimens taken in company with it have the prothorax more evidently granulate and the elytra closely and very finely punctulate, and the elytra of one of these latter are traversed by very fine scratch-like longitudinal lines (not true striæ) and are slightly granulate. The three examples from Lake Callabonna are a little longer and narrower in form, and, therefore, might possibly represent a distinct species; but one of them is less so than the other two. The sculpture of one of the Lake Callabonna specimens (one of the more elongate two) is quite identical with that of the last described example from Coward Springs. The second example from Lake Callabonna has the elytra more decidedly granulate, with several rows of rather large very faintly impressed punctures (scarcely discernible traces of which exist in the original type), the intervals between which are not quite flat; while the third Lake Callabonna specimen has the prothorax still more decidedly, almost strongly, granulate, while its elytra bear almost regular rows of well-defined punctures, the third fifth and seventh intervals between these rows being roundly and quite strongly elevated. The original type and the last mentioned Lake Callabonna specimen could certainly not be treated as specifically identical without the knowledge of the intermediate forms.

H. darlingense, sp. nov. Ovale; subnitidum; nigrum, setulis pallidis minutis minus crebre vestitum, antennis pedibusque plus minusve picescentibus; capite minus lato fortiter minus crebre punctulato, clypeo cum capite confuso antice profunde emarginato, ad latera minus fortiter (oculos parum

excedenti) producto, oculis haud (sed fere) divisus; antennis prothoracis basin attingentibus, articulis 9-10 vix transversis; prothorace quam longiori minus quam duplo latiori, fortius sat crebre nec rugulose punctulato, antice minus profunde emarginato, postice bisinuato, lateribus modice arcuatis, angulis anticis minus acutis posticis subrectis sat explanatis, latitudine majori mox ante basin posita; scutello ut prothorax punctulato; elytris quam prothorax sat latioribus, vix striatis, striis puncturis sat fortibus impressis, interstitiis sat planis subtiliter nec crebre punctulatis; tibiis anticis sat gracilibus apicem versus modice dilatatis; tarsis subtus pilis sat elongatis sericeis vestitis. Long., 4 l.; lat., $1\frac{3}{5}$ l.

This species belongs to the same section of *Hopatum* as *dispersum*, Champion, and *vagabundum*, Champion, and of which *H. longicorne*, Blackb., is also a member; it is distinguished by the long silky hairs that clothe the tarsi, the somewhat exserted head with its clypeus not separated by a furrow, the comparatively narrow orbits of the eyes, the feebly emarginate front of the prothorax, the feebly (or not at all) rugulose character of the sculpture, and the almost (or quite) divided eyes. Mr. Champion describes the eyes of his species as "divided," but in the example of *H. dispersum*, which he has been good enough to send me, the two portions of the eye appear to me to be very narrowly in contact with each other at their hinder extremity as they are in the present species.

The present insect differs from *H. dispersum* by the very feeble but comparatively strongly punctured striae of its elytra, from *H. vagabundum* by its non-granulose elytral interstices, and from *H. longicorne* (to which it is rather close) by the less crowded puncturation of the head and prothorax and by the considerably stronger punctures in the quasi-striae of the elytra.

N.S. Wales; Darling River District.

H. longicorne, Blackb. In my description of this species (Trans. Roy. Soc. S.A., XVI., p. 40) I have introduced an accidental error, having written "capite cum prothorace elytrisque sat fortiter sat crebre nec rugulose punctulato." The word "elytrisque" should be excised.

H. Darwini, sp. nov. Ovale, sat breve; subnitidum; nigrum, setulis aureo-fulvis brevibus subrectis minus crebre vestitum, antennis tarsisque rufescentibus; capite minus lato fortiter crebre punctulato, clypeo cum capite confuso antice profunde emarginato, ad latera minus fortiter (oculos parum excedenti) producto, oculis haud (sed fere) divisus; antennis prothoracis basin vix attingentibus, articulis 8-10 vix con-

vexis; prothorace quam longiori duplo latiori crebre sat fortiter punctulato, antice minus profunde emarginato, postice bisinuato, lateribus sat arcuatis postice vix sinuatis, angulis anticis sat obtusis posticis sat acutis, latitudine majori vix pone medium posita; elytris quam prothorax parum latioribus, punctulato-striatis, puncturis in striis sat magnis sat quadratis, interstitiis subconvexis sparsim punctulatis; tibiis anticis gracilibus, apicem versus leviter dilatatis; tarsis subtus pilis sat elongatis sericeis vestitis. Long., 3 l.; lat. $1\frac{2}{3}$ l.

This also is of the same section as the preceding. It is rather close to *dispersum* and *vagabundum*, differing from the former *inter alia* by the squarish somewhat large punctures in its elytral striæ and the shorter vestiture of its upper surface, and from the latter (as described; I have not seen a type) by the interstices of its elytral striæ not being granuliferous. From *H. longicorne* and *darlingense* it differs *inter alia* by the much stronger striation of its elytra.

N. Territory of S. Australia; near Port Darwin.

H. Victoriae, sp. nov. Ovale; minus opacum; nigrum, setulis griseis sat crebre vestitum; capite sat lato crebre ruguloso, clypeo a fronte sulco sat profundo diviso antice rotundatim minus profunde emarginato, ad latera sat fortiter (fere ut *H. Walkeri*, Champ.) producto; oculis nullo modo divisis; antennis brevibus prothoracem medium haud multo superantibus, articulis 8-10 transversis; prothorace quam longiori plus quam duplo latiori, subtiliter subcrebre indistincte granulato, ad latera explanato (quam *H. Walkeri* vix minus late), antice fortiter emarginato, postice bisinuato, lateribus leviter arcuatis postice nullo modo sinuatis, angulis omnibus leviter acutis, latitudine majori fere ad basin posita; scutello ut prothorax granulato; elytris leviter striatis, striis per rugulas crebras subtiles quasi punctulatis, interstitiis planis crebre subtiliter punctulatis obsolete granulatis; tibiis anticis modicis a basi ad apicem dilatatis, angulo externo apicali acuto; tarsis setis sat crassis subtus sparsim vestitis. Long., 5 l.; lat., $2\frac{1}{2}$ l.

This species perhaps may be best compared with *H. torridum*, Champion, from which its larger size, much more widely explanate prothoracic border, wider and more absolutely flat elytral interstices, and generally finer and less rugulose puncturation render it very distinct. I have seen only a single example, which is in my own collection. It also resembles *Meyricki*, Blackb., differing from it, however, *inter alia* by the feeble rounded emargination of the front of its clypeus.

Victoria.

ULOMA.

U. depressa, Pasc. This name seems to have been provided for the same insect as *U. consentanea*, Perroud. The latter is the older name. I may remark that *Achthosus*, Pasc., does not seem to differ from *Uloma* in any way likely to be really generic, although Pascoe in characterising the former does not make any reference to the latter.

ADELIUM.

A. ellipticum, sp. nov. Elongato-ovale, postice acuminatum; æneum, antennis tarsisque rufescentibus; capite subtiliter, prothorace subtilissime, sparsim punctulatis; hoc antice angustatum, lateribus pone medium rotundatim dilatatis; elytris subtiliter punctulato-striatis, interstitiis sat planis vix manifeste punctulatis. Long., 7—7½ l.; lat., 2½—3 l.

A remarkably distinct species. Mr. Champion informs me that it is in the collection of Mr. F. Bates under the name I have called it by, but I cannot find that any description has been published.

N.S. Wales; Clarence River district.

LICINOMA.

L. sylvicola, sp. nov. Nigra; nitida; capite sparsim subtiliter punctulato, antice transversim late profunde sulcato; antennarum articulo apicali quam 10^{us} paullo longiori; prothorace leviter transverso, postice leviter angustato, sparsim leviter punctulato, lateribus leviter arcuatis, disco foveis nonnullis impresso; elytris sat fortiter punctulato-striatis, interstitiis sat planis lævibus. Long., 4—4½ l.; lat., 1½—1¾ l.

Mr. Champion has done me the favor of comparing this species with the two described by Mr. Pascoe and tells me it is distinct from them. It is obviously very different from *L. violacea*, Macl., of which the elytra are said to be "of a violet hue" and the head is described as "roughly punctate, subrugose." Unfortunately, Mr. Pascoe's descriptions are not of a kind to facilitate the indication of distinctive characters, and in this case I must limit myself to saying that *L. nitida*, Pasc., as compared with the present insect, appears to be differently colored and to have finer elytral striation, while *L. elata*, Pasc., is a larger and also differently colored species.

N.S. Wales; Forest Reefs; taken by Mr. Lea.

ANTHICIDÆ.

SYZETON.

S. letus, Blackb. This species is identical with *S. (Anthicus) abnormis*, King. It cannot be rightly referred to *Anthicus*—

indeed (as I have previously remarked), it is doubtful whether *Anthicus* and *Syzeton* can rightly be associated in one *family*. King's is the older name.

CURCULIONIDÆ.

CYLAS.

C. formicarius, Fab. According to M. Faust (Ann. Soc. Ent. Fr., 1893, p. 513) *C. turcipennis* (Bohem.), Sch., is not distinct from this species, and therefore *turcipennis* ought to be regarded as a synonym. In April of this present year I recorded the occurrence in Australia of *C. turcipennis*.

PHYTOPHAGA.

PAROPSIS.

This genus contains more described Australian species than any other except *Stigmodera*. Mr. Masters' catalogue—1887—enumerates 271 species, and 15 have been added since. The only attempt, so far as I know, at a comprehensive treatment of the species is found in the Ann. Soc. Ent., Belg., 1877, where Dr. Chapuis, in describing a large number of new species, takes the opportunity to subdivide the genus into four groups, and enumerates the species known to him belonging to each group, but omits those of previous authors which he had not identified. Dr. Chapuis' groups are founded on the sculpture of the elytra, as follows:—Group I. Elytral punctures without any seriate longitudinal disposition—27 species. Group II. Differs from I. by the presence of longitudinal smooth spaces among the punctures of the elytra—19 species. Group III. Each elytron bears ten longitudinal rows of punctures—118 species. Group IV. Each elytron bears 20 longitudinal rows of punctures—63 species. This method of subdividing *Paropsis* appears to me the best available—at any rate I cannot find a better. In the Journal of Entomology for December, 1864, Mr. J. S. Baly had commenced a systematic work on *Paropsis*, of which, however, only a single part—dealing with 20 species—appeared. Mr. Baly proposed to divide the genus into only two sections—apparently his first section equalled Dr. Chapuis' first and second combined, and his second Dr. Chapuis' third and fourth combined. I have lately had the good fortune to obtain a large number of species of *Paropsis* from Dr. Chapuis' collection ticketed with his names, and with this assistance have been enabled to ascertain the names of the greater part of the species in my collection and in some other collections to which I have had access; and I think I am in a position to furnish a revision of the genus, which, though doubtless needing correction, may yet serve as a useful basis for

future work. In this present memoir I offer to the Royal Society a revision of the species hitherto described, together with descriptions of 18 new species, belonging to Dr. Chapuis' Group I., and hope in the future to be able to offer revisions of the three other groups.

A few preliminary remarks seem to be called for as to the history of the genus. It was founded in 1807 by Olivier, and again under a different name—*Notoclea*—in the following year by Marsham, each of those authors describing a considerable number of species. Previously to either of these authors, however, several species had been described by Fabricius under the name *Chrysomela*, together with numerous other species, for most of which modern classification has found it necessary to provide other generic names. In subsequent years species of *Paropsis* were described by W. S. Macleay (1827), Boisduval (1835), White (1841), Newman and Erichson (1842), Gory (1845), Gernar (1848), Bohemann (1858), Stål and Motschulsky (1860), Fauvel (1862), Baly (1864), Clark (1865), Chapuis (1877), and Blackburn (1890, 91, and 92).

Turning now to the consideration of the species of *Paropsis* referable to Dr. Chapuis' Group I., I think that the catalogue as given by its author may be regarded as containing all the previously described species that there is good reason for attributing to the group except *Parryi*, Baly, and *Lownei*, Baly; although it is possible that some of the insufficiently described species—especially some of Boisduval—may sooner or later be found by inspection of types to require adding to them. The catalogue, however, contains names of two species that do not seem entitled to appear there, viz., *crocata*, Boisd., and *atomaria*, Marsh. The former of these is not intelligibly described, and in my opinion Dr. Chapuis should have omitted it altogether, as he has done most of Boisduval's names, unless he could give the assurance that he had inspected the type, which it seems almost certain he had not done. I have a specimen from Dr. Chapuis' collection ticketed "*crocata*, Adelaide," which is unquestionably identical with *Waterhousei*, Baly. Among the large number of specimens of the genus that I have examined I have not seen this species from any locality outside S. Australia, while Boisduval's *crocata* is presumably from N.S. Wales. There seems no reason, therefore, to drop Baly's name of the S. Australian insect in favor of a name founded on a species from a distant locality to which no intelligible description is attached, and I accordingly omit *crocata* altogether. As regards *atomaria*, Marsh., it is a *nom. præocc.*, *Paropsis atomaria*, Ol., being a very different insect; and it is remarkable that this escaped Chapuis' notice. Chapuis gives *charybdis*, Stål., as a synonym of *atomaria*, Marsh.; and Baly

thinks that *dilatata*, Er., is probably another synonym of it, he also overlooking the existence of *P. atomaria*, Oliv. Under these circumstances it seems perhaps best to take provisionally the oldest of the names that have been regarded as synonymous and to call the insect *dilatata*, Er., until some reason be produced to the contrary. At all events *atomaria*, Marsh., cannot stand.

Thus corrected, Dr. Chapuis' Catalogue of Group I. contains the names of 27 species, and of these I have more or less reliable types of 25—some few of them identified by description, and most of them represented by types from Chapuis. The two that I do not know are *nigroscutata*, Chp., and *formosa*, Chp.; the former of these is insufficiently described and may possibly be my *montana* or *debilitata*; *formosa* I feel confident that I have not seen.

Dr. Baly's descriptions of the 11 species of this group that bear his names and his re-descriptions of the eight other species dealt with in his paper referred to above are in most respects very satisfactory, but two remarks regarding them seem called for—the one, that they include as main characters the form of internal sexual organs, which, requiring dissection for examination, are obviously not easily available to the student (I have omitted all reference to these organs in my descriptions, from want of material for dissection); the other, that Baly's statements of the comparative length, breadth, &c., of prothorax, elytra, &c. are very unreliable, being evidently not founded on measurement; thus that author makes the prothorax of many species three times (or even more) as broad as long, whereas I have not seen any *Paropsis* (at any rate of Group I.) whose prothorax by measurement is even very nearly three times as broad as long, though to a casual glance some appear so; and again, the proportion of the length of the elytra to their breadth is always over-stated by Baly, those organs appearing to the eye considerably longer as compared with their width than actual measurement shows them to be. One of the species (*P. suspiciosa*) dealt with by Baly is not a member of Chapuis' Group I.

Although the species of *Paropsis* forming this group are for the most part very satisfactorily distinct *inter se*, and unlikely to be reduced in number by subsequent investigation, their distinctive characters are by no means easy to specify sufficiently clearly in words for confident identification—often consisting in differences of form or of sculpture that it is difficult to express definitely. Consequently I have found it necessary to adopt a system of indicating the measurements with exactness, as I find these very constant in either sex of each species. It will be necessary then to explain—first, that by the "height" of a species I mean the distance (the insect being so regarded that the suture

of the elytra is in its upper outline and the lateral margin is in its lower outline and the humeral angle seems directed downward) from the highest point of the upper outline to the lower outline, *i.e.*, the length of that portion of a pin passing from one to the other of these points, which would be in the body of the insect; second, that the length and breadth of the elytra is ascertained on the undersurface, the length being the length of a line from the apex of the elytra to the point where a transverse line from shoulder to shoulder intersects the longitudinal middle line of the insect (usually on the prosternum), the *breadth* being the greatest distance between the lateral edges of the elytra; in measuring the breadth allowance must be made for any displacement there may be of the elytra. It is impossible to measure either length or breadth of elytra reliably on the upper surface owing to the great convexity of those organs.

After long and careful consideration, I have been unable to make use of the external sexual organs as specific characters. They are exceedingly well marked inter-sexually, consisting in the shape of the tarsal joints, the length of the antennæ and the form of the apical ventral segment, and in some species in the outline of the body—but they do not vary much specifically. While this undoubtedly increases the difficulty of distinguishing species, it removes the objection to describing species on the characters of one sex alone, as it is easy to judge with tolerable certainty what would be the characters of the other sex. This remark has reference merely to Group I. of the genus; in at least one of the other groups there are species in which sexual characters seem more important.

In the following table will be found the distinctive characters, then, of 46 species, which is the total number known to me to-day as attributable to Dr. Chapuis' first group of *Paropsis*; viz., 25 enumerated in Dr. Chapuis' Catalogue, three since described by myself, and 18, of which the descriptions are furnished below.

Tabulation of those of the described species of *Paropsis* whose elytral puncturation is entirely confused ("Group I." of Chapuis):—

A. Front angles of prothorax mucronate.

B. Sides of prothorax not (or scarcely) bisinuate.

C. Scutellum deep black.

D. Prothorax more than twice as wide as long *Parryi*, Baly.

DD. Prothorax not more than twice as wide as long.

E. Disc of elytra with raised wart-like inequalities *Lownei*, Baly.

EE. Disc of elytra devoid of wart-like inequalities.

F. Puncturation of elytra moderately close (as in *P. Lownei*) *montana*, Blackb.

- FF. Punctuation of elytra much more close *debilitata*, Blackb.
- CC. Scutellum pallid or a little infusate.
- D. Elytra moderately and not very closely verrucose.
- E. Large species (long. 5 l. or more) with front angles of prothorax strongly mucronate.
- F. Elytral punctuation well defined over the whole surface.
- G. Underside deep black *tasmanica*, Baly.
- GG. Underside pallid or more or less infusate.
- H. Antennæ very long (two-thirds or more of whole body), with third joint much longer than first *longicornis*, Blackb.
- HH. Antennæ normal.
- I. Elytral punctuation moderately close.
- J. Humeral angles normal.
- K. Elytra scarcely wider than long *variolosa*, Marsh.
- KK. Elytra considerably wider than long *affinis*, Blackb.
- JJ. Humeral angles exceptionally strongly produced (elytra longer than wide) *angusticollis*, Blackb.
- II. Elytral punctuation more sparse.
- J. Elytra wider than long.
- K. Elytral punctuation almost wanting near middle of suture *aciculata*, Chp.
- KK. Elytral punctuation less obsolete near middle of suture *Wilsoni*, Baly.
- JJ. Elytra wider than long *advena*, Blackb.
- FF. Elytral punctuation on disc buried in rugulosity *cerea*, Blackb.
- EE. Small species (less than long. $4\frac{1}{2}$ l.); front angles feebly mucronate.
- F. Prothorax sparsely punctulate.
- G. Elytra normally convex.
- H. Very nitid *ornata*, Marsh.
- HH. Much less nitid *Bovilli*, Blackb.
- GG. Elytra gibbous behind scutellum (as in *consimilis*, Baly) *rufitarsis*, Chp.
- FF. Prothorax on disc closely and evenly punctulate *Paphia*, Stål.
- DD. Elytra (at least towards apex) very strongly and very closely verrucose.
- E. Elytra normally convex.
- F. Greatest height of the insect is in front of middle of elytra.
- G. Elytra not wider than long *reticulata*, Marsh.
- GG. Elytra wider than long *insularis*, Blackb.
- FF. Greatest height of the insect is behind the middle of the elytra *dilatata*, Er.

- EE. Elytra gibbous (as in *P. consimilis*, &c.) *gibbosa*, Blackb.
- DDD. Interstices of the elytral punctures quite flat *pictipes*, Chp.
- BB. Sides of prothorax strongly bisinuate.
- C. Prosternum longitudinally concave.
- D. Elytra with raised colored blotches forming a defined pattern.
- E. The blotches on elytra comparatively small.
- F. The blotches not consisting of conspicuous vittæ.
- G. Elytra evenly convex.
- H. Underside black *lutea*, Marsh.
- HH. Underside pallid.
- I. Prosternum very wide, bisulcate *geographica*, Baly.
- II. Prosternum narrower, simply sulcate *marmorea*, Oliv.
- GG. Elytra gibbous (as in *P. gibbosa*, &c.).
- H. One of the conspicuous elevated pale elytral spots is a common one a little in front of middle of suture *colorata*, Blackb.
- HH. None of the conspicuous pale spots is placed on the suture *consimilis*, Baly.
- FF. The blotches consist of conspicuous vittæ *propinqua*, Baly.
- EE. At least one of the elytral blotches large, with diameter equal to one-quarter the width of an elytron ... *maculata*, Marsh.
- DD. Elytra not ornamented with a pattern formed by raised colored blotches.
- E. The wart-like inequalities of the elytra not running in longitudinal series.
- F. Underside more or less pallid.
- G. Elytra moderately or feebly verrucose.
- H. Elytra not or only moderately ovate in form.
- I. Elytra without any trace of transverse dark markings.
- J. Puncturation of elytra moderately close (more close than in *P. obsoleta*, Oliv.).
- K. The color of the elytral punctures black, in strong contrast to the pale yellowish derm ... *roseola*, Baly.
- KK. The elytral punctures concolorous, or nearly so, with the derm.
- L. Prothorax considerably more than twice as wide as long (color pale greenish or greenish yellow) ... *glauca*, Blackb.

- LL. Prothorax very little more than twice as wide as long (color dark brown) ... *ylgarnensis*, Blackb.
- JJ. Puncturation of elytra very sparse (more so than in *P. obsoleta*) ... *Zietzi*, Blackb.
- II. Elytra with distinctly traceable transverse fasciæ, or rows of blotches placed transversely.
- J. Size comparatively small (long., 5 l., or less).
- K. Sides of prothorax exceptionally feebly bisinuate *obsoleta*, Oliv.
- KK. Sides of prothorax normal (*i.e.*, rather strongly bi-emarginate) ... *variegata*, Blackb.
- JJ. Size much larger (long., about 6 l.) ... *mystica*, Blackb.
- HH. Elytra very strongly dilated hindward in both sexes ... *mutabilis*, Blackb.
- GG. Elytra very strongly verrucose, especially near apex.
- H. Elytra normally convex.
- I. Punctures of the elytra moderate (much as in *P. porosa*, Er., &c.) ... *carnosa*, Baly.
- II. Punctures of the elytra very large ... *latissima*, Blackb.
- HH. Elytra sub-gibbous behind scutellum (as in *P. consimilis*, &c.) ... *convexa*, Blackb.
- FF. Underside black ... *bella*, Blackb.
- EE. The wart-like inæqualities of the elytra forming longitudinal series... *intermedia*, Blackb.
- CC. Prosternum convex in its front half ... *porosa*, Er.
- AA. Front angles of prothorax not mucronate.
- B. Lateral margin of elytra normal.
- C. Elytral derm unicolorous fusco-testaceous (length, about 4½ l.) ... *irrorata*, Chp.
- CC. Elytral derm variegated with fulvous and black (length, about 5½ l.) ... *fulvo-guttata*, Baly.
- BB. Elytra with a conspicuous thickened margin (as in *P. longicornis*) ... *Waterhousei*, Baly.
- P. montana*, sp. nov. Late ovalis (mare subrotundato); convexa; sat nitida; subtus atra; supra (scutello atro excepto) testacea plus minusve rufescens, pedibus atris, femoribus tibiisque flavo-variegatis, antennis apicem versus nigris; capite sat fortiter inæqualiter punctulato, linea longitudinali impresso; antennis quam corporis dimidium (maris sat, feminae parum) longioribus, articulo 3° quam 1^{us} vix longiori; prothorace quam longiori vix plus quam duplo latiori, antice sinuatim fortiter emarginato, postice bisinuato, in disco sat

fortiter sat crebre vix acervatim (ad latera crasse) punctulato, interstitiis subtilissime sparsissime punctulatis, lateribus leviter arcuatis, angulis anticis mucronatis posticis fere nullis; elytris quam latioribus haud longioribus (maris brevioribus), minus crebre (fere ut *P. Wilsoni*) punctulatis, interstitiis sparsim punctulatis vix (latera apicemque versus paullo magis distincte) elevatis, angulis humeralibus (a latere visis) rotundatis deorsum sat productis; prosterni parte mediana minus lata, longitudinaliter sulcata. Long., mas., $6\frac{1}{5}$ l.; lat., $5\frac{1}{10}$ l. Fem., long., 7 l.; lat., $5\frac{1}{5}$ l.

This species comes near *P. Parryi*, Baly, and *P. Lownei*, Baly. From the former it differs by its shorter form, elytral interstices even less raised, less transverse prothorax, rufous elytra, &c.; from the latter by its elytra being devoid of distinct wart-like inequalities, its head and prothorax entirely devoid of black markings, &c.

N.S. Wales; Blue Mountains.

P. debilitata, sp. nov. Fem. Sat late ovalis; convexa; sat nitida; subtus atra (sternis plus minusve flavis exceptis); supra (scutello atro excepto) sordide flava, pedibus (exempli descripti) flavis (genubus tibiarum basi et apice tarsisque nigris exceptis), antennis (parte basali excepta) nigris; capite sat fortiter inequaliter punctulato, linea longitudinali antice impresso; antennis quam corporis dimidium parum longioribus, articulo 3^o quam 1^{us} haud longiori; prothorace quam longiori duplo latiori, antice sinuatim fortiter emarginato, postice bisinuato, in disco sat fortiter sat crebre vix acervatim (ad latera crasse) punctulato, interstitiis vix manifeste punctulatis, lateribus leviter arcuatis, angulis anticis mucronatis posticis fere nullis; elytris quam latioribus vix longioribus, sat crebre subtilius (quam *P. variolosi*, Marsh., paullo magis crebre magis subtiliter) punctulatis, interstitiis sparsim punctulatis vix elevatis, angulis humeralibus (a latere visis) rotundatis vix deorsum productis; prosterni parte mediana minus lata, longitudinaliter sulcata. Long., 7 l.; lat., 5 l.

Another ally of *P. Parryi* and *Lownei*, differing from the latter by its elytra devoid of raised inequalities, though the interstices are not quite flat as they are in *P. Waterhousei*, Baly; and from the former (which it resembles in the general color of the upper surface) by the much finer and closer puncturation of its elytra. It is closely allied to *P. montana*, but differs in its color and in the much closer puncturation of its elytra which is not much less close and fine than in *P. Waterhousei*.

Australia; I do not know the exact locality.

P. longicornis, sp. nov. Lata; modice (mari quam femina minus) convexa; minus nitida; testacea plus minusve rufo-tincta, antennis apicem versus mandibulorum apicibus et corporis supra puncturis plurimis nigricantibus; antennis quam corpus totum tertia (vel minore) parte brevioribus, articulo 3^o quam 1^{us} multo longiori; capite prothoraceque acervatim sat fortiter (hoc ad latera crasse) punctulatis, interstitiis sat lævibus; prothorace quam longiori paullo plus quam duplo latiori (sc. ut 8 ad 3½), antice fortiter sinuatim emarginato, postice arcuato, lateribus sat arcuatis, angulis anticis mucronatis sed minus acutis posticis fere nullis; elytris margine laterali insigni crasso instructis, confuse sat æqualiter nec crebre punctulatis, puncturis (his in parte ultra-discalis exceptis) nigris, interstitiis basin versus vix manifeste apicem versus gradatim magis fortiter elevatis, interstitiis alteris lævibus alteris puncturas singulas ferentibus, angulis humeralibus (a latere visis) vix deorsum directis, margine pone humerum laterali vix concavo; prosterno sat angusto, longitudinaliter sulcato. Long., 6½—7 l.; lat., 5—5½ l.

The general color is testaceous with a beautiful pink tone overspreading most of the surface. The punctures on the prothorax are mostly concolorous with the surface, but some are black—usually in clusters; the elytral punctures are all black, except those on the dilated margin. Among the species (of Chapuis' first group of *Paropsis*, to which this insect belongs) having the upper and under surfaces and legs pallid, this species may be at once known by the well-defined thickened lateral edging of its elytra (which is much stronger than in any other *Paropsis* known to me except *P. Waterhousei*) and its long antennæ, which by measurement are fully two-thirds of the length of the whole body in the female and a little longer still in the male. Its nearest ally, however, is the species that I take to be *P. Parryi*, Baly. From *P. Parryi* it departs (according to the description of that species) by its very different coloring in almost every part (*Parryi* having underside scutellum and most of legs and antennæ black, and elytral punctures not black); and also differs from the species that I take to be *Parryi* by its much shorter form, greater closeness of the elytral verrucæ near the apex, less rounded-off apex of the humeral angle, &c.

Victoria; on *Eucalypti*; on the higher mountains of the Alpine Range.

P. cerea, sp. nov. Mas. Sat late ovalis; fortiter convexa; minus nitida; tota (mandibulorum apice nigro excepto) obscure flava (ut cerea), elytris mox intra marginem dilatam vix perspicue longitudinaliter infuscatis; antennis quam corporis dimidium vix longioribus, articulo 3^o quam 1^{us} parum

longiori ; capite prothoraceque acervatim minus fortiter (hoc ad latera sat crasse) punctulatis, interstitiis puncturarum (in capite sat perspicue in prothorace vix manifeste) subtiliter punctulatis ; prothorace quam longiori paullo plus quam duplo (ut $8\frac{1}{2}$ ad 4) latiori, antice fortiter sinuatim emarginato, postice bisinuato, lateribus sat arcuatis, angulis anticis mucronatis sat acutis posticis fere nullis ; elytris suturam versus sparsim subtilius punctulatis, aliunde crasse confuse rugatis (vix perspicue punctulatis), interstitiis inæqualiter verruciformibus sublævibus, angulis humeralibus (a latere visis) manifeste deorsum directis, margine pone humerum laterali sat concavo ; prosterno sat lato longitudinaliter sulcato. Long., 6 l. ; lat., $4\frac{1}{5}$ l.

The whole insect, except the apex of the mandibles, is of a dull flavous color and looks as if it were made of wax. The sculpture of the elytra, except close to the suture, appears to consist of a system of closely-placed deep sinuous wrinkles, among which the interstices are more or less elevated or verrucose ; towards the front part of the dilated margin there are some coarse punctures distinctly visible.

Queensland.

P. affinis, sp. nov. Fem. Subrotundata ; valde convexa ; sat nitida ; testaceo-brunnea, antennis extrorsum atris, mandibulorum apice elytrorum puncturis et sternorum partibus nonnullis infuscatis ; capite modice punctulato, pone clypeum æquali ; antennis modicis, articulo 3^o quam 1^{us} vix longiori ; prothorace quam longiori paullo plus quam duplo latiori, antice sinuatim fortiter emarginato, postice bisinuato, in disco acervatim sat fortiter vix sparsim (ad latera crassissime) punctulato, interstitiis vix manifeste punctulatis, lateribus modice arcuatis, angulis anticis mucronatis posticis fere nullis ; elytris quam longioribus paullo latioribus, fere ut *P. variolosi*, Marsh., sculpturatis (*i.e.*, modice crebre fusco-punctulatis et verrucis sat numerosis obsolete elevatis ornatis), angulis humeralibus (a latere visis) rotundatis deorsum parum productis ; prosterno modico longitudinaliter sulcato. Long., $6\frac{1}{2}$ l. ; lat., $4\frac{1}{5}$ l.

This species, perhaps, is nearest to *P. variolosa*, Marsh., from which it differs by its shorter form and greater convexity (the height of the insect being to the length of the elytra as 7 to 12 ; in *variolosa* it is as 7 to 13), its antennæ deep black outside the fifth joint, its head not longitudinally impressed, &c. I have seen only a single specimen of this insect, which is in my own collection.

N.S. Wales ; Clarence River District.

P. advena, sp. nov. Fem. Ovalis; convexa; sat nitida; obscure flava, mandibulorum apice labro clypeo antice et elytrorum vittis nonnullis nigricantibus; antennis extrorsum paullo infuscatis; capite modice punctulato, linea subtili longitudinali leviter impresso; antennis quam corporis dimidium brevioribus, articulo 3° quam 1^{us} haud longiori; prothorace quam longiori paullo plus quam duplo latiori, antice sinuatim fortiter emarginato, postice bisinuato, in disco acervatim sat fortiter subcrebre (ad latera crassissime) punctulato, interstitiis obsolete subtilissime punctulatis, lateribus sat arcuatis, angulis anticis mucronatis posticis fere nullis; elytris quam latioribus paullo longioribus, minus crebre (fere ut *P. Wilsoni*, Baly) sat fortiter punctulatis, puncturis in vittis latis nigricantibus, interstitiis leviter inæqualiter elevatis, angulis humeralibus (a latere visis) rotundatis deorsum parum productis; prosterno modice lato longitudinaliter sulcato, sulco fundo postice carinato. Long., $6\frac{1}{2}$ l.; lat., $4\frac{2}{3}$ l

The comparatively elongate form of this insect, with elytra by measurement distinctly (by about $\frac{1}{12}$ of their width) longer than together wide, together with the comparatively sparse puncturation of its elytra, will distinguish it from its allies. The markings on the elytra of my unique example are very distinctive, but it is doubtful whether they are constant; they consist of a number of wide dark vittæ (on which the punctures are nearly black) and may be thus described: from a point on the suture slightly in front of the apex five vittæ diverge forwards (*i.e.*, towards the front of the elytra)—one up the suture, one close to the lateral margin, and three at equal intervals between; the sutural vitta is continuous to near the scutellum, a little behind which it ceases; the others extend to the base, but the second (counting from the suture) is widely interrupted in the middle; the external three all become very faint about the middle and then becoming well defined again coalesce in a large blotch on and around the humeral callus. The width of these vittæ is such that they are wider than the intervals between them; the first, third, and fourth are the widest.

Australia; exact habitat unknown, but it is probably in S.W. Australia.

P. angusticollis, sp. nov. Fem. Ovalis; convexa; minus nitida; testacea, antennis versus apicem mandibulisque nigricantibus; antennis quam corporis dimidium brevioribus, articulo 3° quam 1^{us} haud longiori; capite sparsim punctulato; prothorace quam longiori vix duplo latiori, antice sinuatim fortiter emarginato, postice bisinuato et in medio lobato (lobo postice subtruncato), in disco sparsissime sat subtiliter latera versus magis crasse paullo magis crebre punctulato,

interstitiis sparsim subtilissime punctulatis, lateribus sub sinuatim arcuatis, angulis anticis mucronatis posticis fere nullis; elytris (parte antica suturali excepta) subobsolete verrucosis, minus crebre (fere ut *P. Wilsoni*, Baly, sed magis subtiliter) punctulatis, interstitiis sparsim subtilissime punctulatis, angulis humeralibus (a latere visis) rotundatis deorsum sat fortiter (magis quam *P. variolosi*, Marsh.) directis; prosterno lato sulcato, sulci fundo sat fortiter carinato. Long., $7\frac{3}{4}$ l.; lat., 5 l.

In the example on which this description is founded the elytral punctures are only slightly infuscate; in a second specimen they are almost black. The most conspicuous character of this fine large species seems to lie in the narrowness of its prothorax; a second character consists in the evident though slight sinuosity of the lateral margin of its prothorax.

Australia; exact habitat uncertain, probably N.S. Wales.

P. Bovilli, sp. nov. Fem. Late ovata; sat convexa; sat nitida; testaceo-brunnea (mandibulorum apice et in elytris verrucarum interstitiis nigricantibus labroque albido exceptis); antennis quam corporis dimidium vix longioribus, articulo 3^o quam 1^{us} haud longiori; capite prothoraceque acervatim modice fortiter hoc ad latera sat crasse punctulatis, interstitiis minus crebre sat perspicue punctulatis; prothorace quam longiori duplo latiori, antice fortiter sinuatim emarginato, postice bisinuato, lateribus sat arcuatis, angulis anticis mucronatis sat acutis posticis fere nullis; elytris sat fortiter minus crebre punctulatis, crebre verrucosis (fere ut *P. carnose*, Baly), angulis humeralibus (a latere visis) rotundatis deorsum parum directis, margine pone humerum laterali vix concavo; prosterno lato (vix quam *P. geographica*, Baly, angustiori) longitudinaliter sulcato. Long., 4 l.; lat., 3 l.

The sculpture of the elytra is extremely like that of *P. carnosa*, Baly, but the raised spaces all being of testaceous-brown color and the interstices all blackish the appearance is that of a black surface covered with closely and regularly placed raised pale blotches. The elytral sculpture compared with that of *P. reticulata* shows verrucæ almost as closely placed, but individually larger and not becoming smaller and more crowded towards the apex. This species is not capable of confusion with any other yet described; it most resembles the species that I take (and my determination agrees with Dr. Chapuis') to be *P. ornata*, Marsh., which, however, is a considerably smaller and much more nitid species with very much less closely verrucose elytra. Viewed from the side the summit of the outline curve of the upper

surface is just about the centre of the insect (*i.e.*, a little in front of the middle of the elytra), and the greatest height (the insect still being inspected from the side) is about half the length of the elytra.

N. Territory of S. Australia.

P. colorata, sp. nov. Fem. Ovata; convexa, elytris ante medium (ut *P. consimilis*, Baly) subgibbosis; lutea, antennis extrorsum obscurioribus, elytris maculis laevibus pallide flavis plurimis ornatis, ex his 4 quam ceterae majoribus (sc. 1 pone basin ad latitudinem mediam, 1 mox intra marginem lateralem ad longitudinem mediam, 1 longe pone longitudinem mediam suturam versus, 1 communi in sutura ante medium); capite sat crebre sat subtiliter punctulato, subtiliter longitudinaliter impresso; antennis quam corporis dimidium brevioribus, articulo 3° quam 1^{us} vix longiori; prothorace quam longiori duplo latiori, antice sinuatim fortiter emarginato, postice leviter bisinuato, in disco subtiliter sparsius acervatin (ad latera crasse) punctulato, interstitiis subtilissime punctulatis, lateribus minus arcuatis profunde bis emarginatis, angulis anticis mucronatis posticis fere nullis; elytris quam longioribus vix latioribus, sat crebre (fere ut *P. marmorea*, Oliv.) fusco-punctulatis, interstitiis subtilissime sparsissime punctulatis antice planis apicem versus obsolete rugulosis, angulis humeralibus (a latere visis) sat rotundatis deorsum parum productis; prosterni parte mediana modica, longitudinaliter sulcata. Long., 5 l.; lat., $3\frac{9}{10}$ l.

This species is very like *P. marmorea*, Oliv., having its elytral pattern scarcely different, except in the larger spots being larger than the corresponding ones in *marmorea* and the spot near the lateral margin being much more conspicuous; but these characters may be variable. From all the allied species having a pattern (except *consimilis*), this one, however, is easily separated by its elytra not evenly convex, but with a distinct indication of rising into a kind of hump a little behind the base, and from them all it is distinguished also by its elytral interstices quite flat except near the apex, and even there only feebly rugulose.

Queensland; unique in my collection.

P. glauca, sp. nov. Fem. Sat late ovalis; convexa; minus nitida; sordide flavo-viridis; capite sat crebre sat subtiliter punctulato, antice breviter longitudinaliter impresso; antennis quam corporis dimidium vix longioribus, articulo 3° quam 1^{us} sub-breviori; prothorace quam longiori plus quam duplo latiori, antice sat fortiter vix sinuatim emarginato, postice leviter bisinuato, in disco sat crebre sat aequaliter minus fort-

titer (ad latera crasse) punctulato, interstitiis subtilissime punctulatis, lateribus sat arcuatis sat fortiter bisinuatis, angulis anticis mucronatis posticis fere nullis; elytris quam longioribus vix latioribus, crebre fortiter (quam *P. Waterhousei* paullo magis crebre magis crasse) punctulatis, interstitiis subtilissime sparsim punctulatis leviter sat æqualiter rugulosis, angulis humeralibus (a latere visis) rotundatis vix deorsum productis; prosterni parte mediana minus lata, longitudinaliter sulcata. Long., $4\frac{1}{2}$ — $5\frac{1}{3}$ l.; lat., $3\frac{1}{5}$ — $3\frac{1}{2}$ l.

This is a very distinct species bearing a general superficial resemblance to *P. Waterhousei*, Baly, but with the prothorax bisinuate laterally, the elytra more closely and less finely punctulate with the interstices of their punctures distinctly more rugulose, &c.

S. Australia.

P. mystica, sp. nov. Fem. Ovalis; convexa; sat nitida; testacea, elytrorum disco bifasciatim infuscato; capite cum prothorace ut præcedentis sculpturato sed illo haud longitudinaliter impresso; antennis quam corporis dimidium haud longioribus, articulo 3° quam 1^{us} haud longiori; prothorace quam longiori vix duplo latiori, antice fortiter vix sinuatim emarginato, postice bisinuato, lateribus minus arcuatis fortiter bisinuatis, angulis anticis mucronatis posticis fere nullis; elytris quam latioribus vix longioribus, sparsim sat fortiter (fere ut *P. obsoletæ*, Oliv.) punctulatis, interstitiis subtilissime punctulatis leviter subobsolete (fere ut *P. obsoletæ*) convexis, angulis humeralibus (a latere visis) minus rotundatis vix deorsum productis; prosterni parte mediana sat lata, longitudinaliter sulcata. Long., 6 l.; lat., $4\frac{1}{4}$ l.

This species closely resembles *P. obsoleta* in respect of the sculpture of its elytra, but differs much from that insect in its larger size, much less transverse and more strongly punctured prothorax, narrower form, &c. The markings on its elytra (if constant) furnish a very distinctive character. The whole disc of each elytron is of a dark-fuscous color (the punctures on this color being also dark-fuscous), except a space in front of and another behind the middle; thus the lateral portions of the elytra are of the general color (testaceous), while the rest of the surface presents dark coloring along the base and two dark fasciæ, one at, the other behind, the middle.

S. Australia.

P. variegata, sp. nov. Mas. Late ovalis; subrotundata; convexa; sat nitida; rufo-testacea, antennis apicem versus plus minusve infuscatis, capite prothoraceque fusco-variegatis,

elytrorum interstitiis hic illic irregulariter flavis; capite sat crebre minus fortiter punctulato, longitudinaliter impresso; antennis quam corporis dimidium longioribus, articulo 3° quam 1^{us} vix longiori; prothorace quam longiori paullo plus quam duplo latiori, antice sinuatim fortiter emarginato, postice bisinuato, in disco acervatim sat fortiter (ad latera crasse) punctulato, lateribus modice arcuatis fortiter bisinuatis, angulis anticis mucronatis posticis fere nullis; elytris quam longioribus sat latioribus, fortiter sat crebre (fere ut *P. carnosa*, Baly) fusco-punctulatis, interstitiis lævibus obsolete irregulariter (fere ut *P. obsoleta*, Oliv.) inæqualibus, angulis humeralibus (a latere visis) rotundatis, vix deorsum productis; prosterni parte mediana modica, longitudinaliter sulcata. Long., $4\frac{1}{5}$ l.; lat., $3\frac{4}{5}$ l.

This species is much like *P. carnosa*, Baly, in general appearance and is similarly colored, having many of the rugulose interstices of the elytra yellow so as to produce the appearance of the elytra bearing numerous small yellow specks, which are unevenly distributed in such fashion that the elytra can be regarded as having yellow as their ground color and three indistinct reddish fasciæ as their markings; in none of the specimens I have seen of this insect is there any trace of the obscure dark piceous patches that are generally more or less traceable on the elytra of *P. carnosa*. From *P. carnosa* the present species differs in the prothoracic puncturation being less close and being arranged in clusters, also in the interstices of the elytral puncturation being less convex—so that the punctures themselves are much more conspicuous, the punctures in *P. carnosa* being less noticeable on account of the depth of the inequalities in which they lie. I have a single female example which is too much broken for exact description, but evidently scarcely differs from the male except in the usual sexual respects, *i.e.*, narrower form, shorter antennæ, &c.

N.S. Wales; Queanbeyan (Lea), &c.

P. mutabilis, sp. nov. Mas. Late ovata, apicem versus fortiter dilatata; convexa; minus nitida; sordide viridis (nonnullorum exemplorum mortuorum colore plus minus in rufotestaceum transeunti), antennis apicem versus infuscatis; capite longitudinaliter vix impresso cum prothorace sat crebre fortius punctulato (fere ut *P. carnosa*, Baly); antennis quam corporis dimidium vix longioribus, articulo 3° quam 1^{us} haud longiori; prothorace quam longiori plus quam duplo latiori, antice vix sinuatim fortiter emarginato, postice leviter bisinuato, ad latera sat crasse ruguloso, lateribus minus arcuatis fortiter bisinuatis, angulis anticis mucronatis posticis fere nullis; elytris quam longioribus paullo latior-

ibus, crebre fortiter punctulatis (quam *P. carnosæ*, paullo magis crebre), interstitiis sparsim fortius punctulatis modice elevatis, angulis humeralibus (a latere visis) vix rotundatis deorsum nullo modo productis; prosterni parte mediana modica, longitudinaliter sulcata. Long., $4\frac{1}{3}$ l.; lat., 4 l.

A very distinct species owing to its strongly ovate form recalling to mind the Tenebrionid genus *Byrsax* (figured in Journ. Ent., I., pl. iii., fig. 7).

The absence of a sinuation on the margin of the elytra behind the shoulder is also a notable character.

S. Australia; Yorke's Peninsula.

P. convexa, sp. nov. Fem. Ovata; minus nitida; valde convexa, elytris ante medium (ut *P. consimilis*, Baly) subgibbosis; rufo-testacea; capite prothoraceque ut præcedentis sculpturatis; antennis quam corporis dimidium brevioribus, articulo 3° quam 1^{us} vix longiori; prothorace quam longiori duplo latiori, cetera ut præcedentis; elytris quam latioribus vix longioribus, fere ut *P. reticulata*, Marsh., sculpturatis set etiam magis fortiter verrucosis, angulis humeralibus (a latere visis) vix rotundatis, deorsum vix productis; prosterni parte mediana sat lata, longitudinaliter sulcata, sulci fundo longitudinaliter convexo. Long., $5\frac{1}{5}$ l.; lat., 4 l.

With the form and elytral sculpture of *P. reticulata*, Marsh., this species has the prothorax closely and on the disc evenly punctulate with its sides strongly bisinuate, and the elytra subgibbous behind the scutellum as in *P. consimilis*, Baly. The last-named character distinguishes it from all the allied species, with which it is otherwise capable of confusion.

S. Australia; Fowler's Bay.

P. latissima, sp. nov. Mas. Subcircularis; sat nitida; sat convexa; sordide flavescens elytrorum disco infuscato; capite crebre subtilius punctulato, longitudinaliter vix manifeste impresso; antennis quam corporis dimidium sat longioribus, articulo 3° quam 1^{us} vix longiori; prothorace quam longiori paullo plus quam duplo latiori, antice sinuatim fortiter emarginato, postice bisinuato, in disco acervatim sat crebre sat fortiter (ad latera crasse) punctulato, interstitiis sparsim subtilius punctulatis, lateribus sat arcuatis sat fortiter bisinuatis, angulis anticis mucronatis posticis fere nullis; elytris quam longioribus multo latioribus, grosse sat crebre punctulatis, interstitiis inæqualiter valde elevato-rugulosis, angulis humeralibus (a latere visis) rotundatis deorsum vix productis; prosterni parte mediana modica, longitudinaliter sulcata. Long., $4\frac{2}{3}$ l.; lat., 4 l.

Remarkable for the extreme coarseness of its elytral sculpture,

which character suffices alone to separate it from its described allies.

S. Australia.

P. bella, sp. nov. Mas. Sat late ovata; sat nitida; sat convexa; subtus niger, plus minusve flavo-notata; supra flavo-lutea, antennis (basi excepta) nigris, pedibus nigris plus minusve flavo-notatis; capite crebre subtilius punctulato, longitudinaliter parum impresso; antennis quam corporis dimidium sat longioribus, articulo 3° quam 1^{us} paullo longiori; prothorace quam longiori plus quam duplo latiori, antice sinuatim fortiter emarginato, postice obsolete bisinuato, in disco acervatim sat crebre sat fortiter (ad latera crasse) punctulato, interstitiis subtilissime sparsim punctulatis, lateribus modice arcuatis fortiter bisinuatis, angulis anticis mucronatis posticis fere nullis; elytris quam longioribus parum latioribus, fortiter subcrebre (ut *P. porosæ*, Er.) punctulatis, interstitiis sparsim punctulatis antice sat planis apicem versus subverrucosis, angulis humeralibus (a latere visis) minus rotundatis deorsum manifeste productis; prosterni parte mediana modica, longitudinaliter sulcata, sulci fundo postice longitudinaliter convexo. Long., $5\frac{1}{3}$ l.; lat., $4\frac{1}{5}$ l.

This species has much superficial resemblance to *P. porosa*, Er., but differs from it by considerably larger size, flatter elytral interstices (especially in front), &c., and especially by the different shape of the prosternum.

Australia; I have no record of the exact locality.

P. Zietzi, sp. nov. Fem. Sat late ovata; sat nitida; convexa; pallide flavo-testacea, antennis (basi excepta) nigris; capite crebre subtiliter punctulato, longitudinaliter perspicue subtiliter impresso; antennis quam corporis dimidium paullo brevioribus, articulo 3° quam 1^{us} breviori; prothorace quam longiori paullo plus quam duplo latiori, antice sinuatim fortiter emarginato, postice leviter bisinuato, in disco acervatim subtilius minus crebre (ad latera sat crasse nec crebre) punctulato, interstitiis subtiliter punctulatis, lateribus sat arcuatis distincte leviter bisinuatis, angulis anticis mucronatis posticis fere nullis; elytris quam longioribus vix latioribus, minus crebre minus fortiter fusco-punctulatis, interstitiis leviter inæqualiter convexis, angulis humeralibus (a latere visis) leviter rotundatis deorsum leviter productis; prosterni parte mediana minus lata longitudinaliter sulcata. Long., 4 l.; lat., $3\frac{1}{5}$ l.

This species resembles *P. obsoleta*, Oliv., but differs from it (apart from color) by its somewhat narrower form, its less trans-

verse prothorax, the finer puncturation and less elevated interstices of its elytra, and the distinct prominence (in a downward direction) of its humeral angles.

S. Australia; taken by Mr. Zietz near Lake Callabonna.

P. intermedia, sp. nov. Fem. Ovata; modice nitida; convexa; testacea, elytris rufescentibus; capite sat crebre sat subtiliter punctulato, longitudinaliter impresso; antennis quam corporis dimidium longioribus, articulo 3^o quam 1^{us} multo longiori; prothorace quam longiori paullo magis quam duplo latiori, antice sinuatim fortiter emarginato, postice bisinuato, in disco sat fortiter minus crebre (ad latera crasse) punctulato, interstitiis sparsim subtilissime punctulatis, lateribus modice arcuatis leviter bisinuatis, angulis anticis mucronatis posticis fere nullis; elytris quam latioribus vix longioribus, fortiter minus crebre punctulatis, interstitiis (parte circa scutellum posita excepta) fortiter confertim subseriatim verrucosis, angulis humeralibus (a latere visis) sat rotundatis deorsum manifeste productis; prosterni parte mediana minus lata, longitudinaliter sulcata. Long., $5\frac{3}{5}$ l; lat. 4 l.

This is a remarkable species, linking Dr. Chapuis' first group of *Paropsis* to his fourth group. The sculpture of its elytra is almost exactly as in *P. aspera*, Chp. (of the fourth group), excepting in the verrucæ of the alternate interstices not being markedly different from those of the other interstices, and the seriate arrangement of the verrucæ being less regular. The disposition of the sculpture cannot without qualification be called either "confused" or "seriate," but I think the bisinuation of the sides of the prothorax should settle the doubt in favor of the first group. The puncturation of the elytra is almost invisible except near the scutellum, being buried in the deep interstices of the verrucæ.

N.S. Wales.

CANDEZEA.

C. Leai, sp. nov. Oblonga; rufo-testacea, antennis (basi excepta) et elytrorum macula magna mox ante apicem posita nigropiceis, tarsis plus minusve infuscatis; antennarum articulo basali quam 4^{us} vix breviori 3^o quam 2^{us} vix longiori; capite prothorace que vix manifeste, elytris crebre subtiliter, punctulatis; corpore subtus parce pubescenti; epipleuris postice anguste fere ad apicem continuatis. Long. 2 l; lat., $\frac{9}{10}$ l.

This species is easily recognisable by its color and markings, but I have some hesitation in referring it to *Candezea*. Dr. Baly (Jour. Linn. Soc. xx.) thinks that the prolongation of the elytral epipleuræ is not inconsistent with *Monolepta*. Jacoby (Ann. Mus. Genov. 1886, p. 116), on the contrary, argues that all the so-called *Monoleptæ* having the epipleuræ prolonged should be

removed from the genus. Following Jacoby I have referred the present insect to *Candezea* on account of its epipleuræ being very manifestly (not excessively narrowly) continued nearly to the apex of the elytra, but a casual glance would unhesitatingly place it in *Monolepta* of which it has entirely the facies. The blackish spot occupies nearly the entire apical-half of each elytron, scarcely reaching the suture, being very distinctly separated from the lateral margin and divided from the apex by a space nearly equal to a quarter of its own length. The anterior coxæ are quite closed posteriorly.

N.S. Wales ; taken by Mr. Lea.

COCCINELLIDÆ.

CÆLOPHORA.

C. gratiosa, Muls. Mr. Kæbele has sent me a remarkable series of specimens which must, I think, be attributed to this species. He writes that he is confident they must all be regarded as conspecific, nearly all having been bred from one batch of similar pupæ found on a single orange tree. I am disposed to think he is right, although if it be so *C. gratiosa* is one of the most variable of the *Coccinellide*. I can find no characters to distribute the examples before me, except in respect of color and markings, but these vary to an almost incredible extent, scarcely any two of them being alike. One specimen among them agrees very well with the description of *C. gratiosa* except in most of the yellow portions being of a *pale* (almost *whitish*) yellow color, but in other specimens (which, however, vary in other respects from the description) of the series the yellow color is as Mulsant characterises it. The following is a description of the markings on the example that I regard as almost typical:—Head bright yellow with a continuous black border along the front of the clypeus and running back on either side so as to touch the post-ocular sinuosity to the middle of the lateral edge, the hinder half of the lateral edge and the whole of the base being black [there is a narrow yellow line along the front of the prothorax not mentioned in the description, but this is wanting in others of the series]; scutellum black; elytra whitish-yellow with all their margins narrowly black and a very wide black fascia occupying nearly the middle half of their length, this fascia being angularly produced on its front margin on the disc of each elytron and on its hindmargin correspondingly emarginate, the sutural black border being dilated from the scutellum to the fascia in such manner as to present the appearance of a triangle whose apex touches the scutellum while its base is merged in the fascia.

Regarding the specimen I have described as the type, the next

example (var. A) varies in there being two large yellowish-white spots in the fascia on each elytron, but otherwise is identical. Var. B is identical with var. A, except in the angular projection of the fascia on the disc of each elytron being continued forward to the base of the elytron (so that this var. may be regarded as having black elytra, each bearing five large whitish-yellow spots). Var. C differs from B only in the yellow coloring being very much brighter, and the yellow front margin of the prothorax being absent. Var. D is best compared with B, from which it differs in the front margin of the prothorax being *widely* yellow, while there are two yellow spots on the disc near the base, and in the great diminution of black marking on the elytra, the lateral black border having disappeared and the other black markings being represented by markings of similar form, but of a pale brown color, which here and there, however, deepen into black. Var. E seems to be a development of D, having the discal black of the prothorax not only edged in front, but also traversed near the base by yellow, and having the elytra entirely edged with black, as in C, but with the black fascia transformed into an ill-defined pale-red blotch, roughly resembling the fascia in the typical form (but with its anterior extension much as in B and C), yet not reaching the lateral margin. [Without the intermediate forms var. E could certainly not be connected with the type]. Var. F resembles E except in the anterior extension of the elytral fascia being absent. Var. G. is entirely of a yellowish-testaceous color except the lateral margin of the prothorax in its hinder part, the scutellum, and all the elytral edges are black. (*C. versipellis*, Muls., is extremely like this var., but is much larger and I think distinct.) Var. H is like G, but with the elytra opaque owing to close asperate puncturation; a singular variation, which I have observed in several of the Australian *Coccinellidae*. In all these specimens the undersurface, legs, and antennæ agree with Mulsant's description of the type. M. Mulsant unites *C. gratiosa* with *patruelis* in his Monograph of the *Coccinellidae* (p. 276) and I should think it not unlikely he may be right in doing so, although Mr. Crotch in his "Revision" seems to regard them as distinct. I have not seen a specimen, however, that agrees with M. Mulsant's description of *C. patruelis* and therefore am not in a position to express a decided opinion on the point.

C. veranioides, sp. nov. Ochracea; prothorace nigronotato; elytrorum marginibus (basali excepto) omnibus et vitta discoidali (hac nec basin nec apicem attingenti in medio constricta vel interrupta), corpore subtus (abdominis lateribus exceptis), pedibusque (tibiis anticis tarsisque omnibus exceptis) nigris; prothorace elytrisque subtiliter minus

crebre punctulatis ; prosterno bicarinato ; metasterno antice truncato ; abdominis laminis nec apicem nec marginem lateralem segmenti attingentibus. Long., $1\frac{3}{4}$ — $2\frac{1}{5}$ l. ; lat., $1\frac{1}{2}$ — $1\frac{4}{5}$ l.

The black marks on the prothorax are a basal fascia, the front margin of which is sinuous, and there are two discal spots immediately in front of the basal fascia (in some examples joined to it). The black lateral margin of the elytra is dilated in the middle ; the sutural black margin is more or less dilated a little before the apex. This species is apparently near to *C. Ripponi*, Crotch, but differs in being much smaller, with the discoidal vitta of the elytra not reaching the base, and constricted in the middle (interrupted in some examples). I should suppose it to be possibly a var. of *Ripponi*, were it not that Mr. Crotch expressly states that in that species the abdominal lamella reaches the lateral margin of the segment.

N.S.W. ; taken by Mr. Koebele on Harwood Island.

ORCUS.

O. nummularis, Boisd. Mr. Koebele informs me that this is certainly a good species and that its larva is quite different from that of *O. Australasiæ*, Boisd., of which insect it has been considered a variety.

